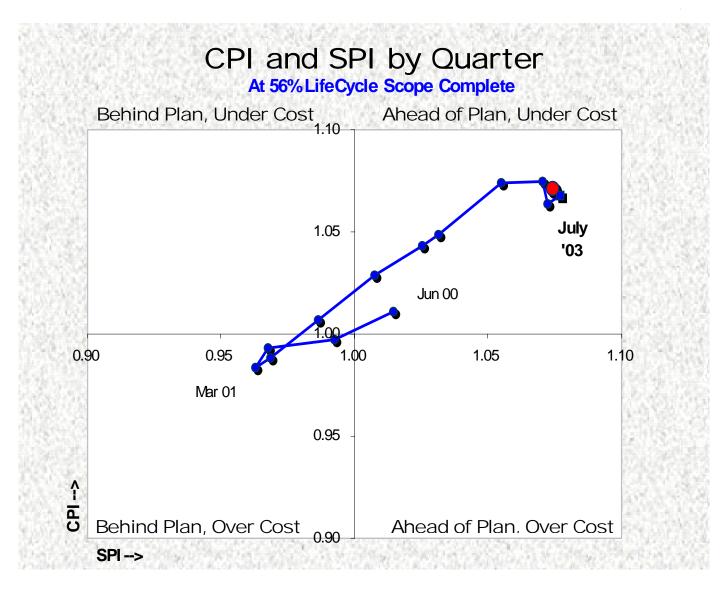
# ROCKY FLATS Monthly Project Report

**FY03** July, 2003



## **Executive Overview**

**In General**: With the Closure Project about 58% complete against the contract baseline, K-H continues to complete work activities below estimated cost and ahead of schedule. K-H continues its emphasis on working safely and maintaining compliance with procedures to ensure safe operations.

**Key Accomplishments:** A major milestone in Site closure was reached this month as Plutonium stabilization and packaging operations completed on July 8<sup>th</sup>, and the last shipment of nuclear material left the site on August 8<sup>th</sup>. D&D activities remain on or ahead of schedule. Work progresses in the nuclear buildings and on the south side of the Industrial Area with two reportable structures demolished during July. The Waste program shipped 413m3 of TRU, 3,180m3 of Low Level, and 2,081m3 of Low Level Mixed Waste, and Environmental Remediation program has completed remediation of 159 of 225 cells (71%) at the 903 Pad.

METRIC						
Safety:	Events of "Significant Concern" or above: 0					
Bears Watching	Offsite Hospitalizations: 0 Lock-Out-Tag-Out Violations: 0 Potential Uptakes: 4 / Skin Contaminations: 5 Rad/Haz Transport Incidents: 0					
Cost Variance:	Cumulative Cost Variance = +7%, +\$152M out of ~\$2,289M BCWP <sub>CUM</sub>					
On Plan	LIFECYCLE: 57.5% of target scope completed; 54% of target cost expended.					
Schedule Variance:	Predetermined Work Activities $SV = +63\%$ , $+\$122M$ LIFECYCLE: 17% of scope scheduled; 27.5% of scope completed.					
On Plan	Traditional Schedule Variance = +7%, +\$158M LIFECYCLE: 53.5% of scope scheduled; 57.5% of scope completed.					
Critical Path	CP = SNM activities, B371 D&D Estimated Completion Date: December 15, 2006					
Completion Date: On Plan	The working plan critical path has remained stable for seven months. The contractor continues to examine critical path activities for acceleration opportunities. RFFO is continuing to use the original Target Date, December 15, 2006, as the ECD.					
Current CP: On Plan	51% (42 months) of contract duration of					
Key Milestones	Closure Activities: The 334 Maintenance shop and 790 Radiation Calibration Lab w					
DNFSB: On Plan	demolished this month, along with a cooling tower near B881 and a small storage facility.					
	<b>DNFSB</b> : <u>Pu Metals &amp; Oxides</u> – PuSPS operations completed on July 8, 2003.					
RFCA: On Plan	RFCA FY03 Milestones: All milestones completed for 2003					
GFS/I	GFS/I requirements are being met and/or are in process except as noted here:					
Status: On Plan	Need DOE receiver site for Low Level Mixed Waste Orphans (between 10 and 100 nanocuries/gram).					
Forecast: Bears Watching						

# **Executive Summary**

## **Contract Status**

TC: <u>3.973B (Original: 3.963)</u>
TF: <u>\$340.8M (Original: \$340M)</u>
TCD: <u>15 December 2006</u>

## **Penalty Assessment**

No Fee Penalties were issued in July. To date, four fee penalties have been issued under the terms of this contract with total penalties equaling \$510,000.

## **Requests for Equitable Adjustments (REAs):**

National Emergency REA-HQ is reviewing RFFO's comprehensive response to issues raised on the Proposed Settlement. WIPP/WAC Part III has been revised and Kaiser-Hill is responding to additional issues raised by RFFO. The Size Reduction/Shipment of items to SRS-REA has been changed to incorporate additional items and a revised estimate is expected in June. The revised PuSPS Moisture measurement REA is pending fact finding. No REAs have been incorporated into the contract this month.

## Pending REA's: ~ \$36.3M

- ~ \$16.4 million: National Emergency (2002 2003 Costs)
- ~ \$12.1 million: WIPP WAC Part III (projected 2002 2005 costs)
- ~ \$2.7 million: Size Reduction/Shipment to SRS
- ~ \$2.6 million: PuSPS Moisture measurement
- ~ \$2.5+ million in these miscellaneous REAs: System Engineers/B371 VSS NTS Waste Acceptance Criteria PuSPS outside SRS Requirement Beryllium Monitoring



#### **Critical Path**

PuSPS operations are no longer on the Critical Path. The remaining Critical Path continues to run through B371 D&D, followed by site grading. RFFO is monitoring the critical path and near critical path activities and for the foreseeable future will continue to utilize December 15, 2006 as the estimated completion date.



#### **GFS/I Performance**

Most requirements for Government Furnished Services / Items have been and continue to be met. The key remaining issue is the identification of disposal sites for LLMW between 10 and 100 nCi/g activity. Two possible sites have been identified: Hanford, and the Nevada Test Site (NTS):

- Disposal at Hanford is dependent upon a Record of Decision on an Environmental Impact Statement that is not expected until October 2003.
- Disposal at NTS is dependent upon permit approval from the State of Nevada. There is no specific timeframe for the permit approval.

Without disposal capability, these "orphan" wastes may need to be stored offsite at a commercial treatment facility at increased cost to the closure project. Some may be returned to the site after treatment, again with increased costs, only to face diminishing storage capacity as facilities are being deactiviated and demolished.

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## **Safety**

**0 Events of "Significant Concern" or Above** 

OFFSITE HOSPITALIZATIONS: None.

LOCK-OUT-TAG-OUT VIOLATIONS: None.

## POTENTIAL UPTAKES: (4)

- 1) <u>B777 removing ducting</u>: Workers improperly used a scissor lift to assist in removing ducting from a wall penetration in Building 777. The load shifted from horizontal to nearly vertical when it cleared the wall and apparently caused a tear in the plastic containment around the area. Three workers wee found to have small intakes of 3mrem, 3mrem and 1mrem, respectively.
- 2) <u>B371 Walkdown:</u> An air monitor alarmed during a walk down to support D&D activities in room 3511. The air monitor alarm was determined to be positive. No personnel were wearing respiratory protection at the time. The source of contamination was determined to be a faulty glove port on the GB.
- 3) <u>B371 contamination on outside of drum</u>: See Skin Contamination Item #5, below.
- 4) <u>B371 Improper opening of doors:</u> Involved two D&D crews in Building 371, rooms 3521 and 3553. Simultaneous opening of doors between these two rooms resulted in contamination being spread into an area not posted for respiratory protection. Two RCTs had Potential Intake's less than2, and twelve persons were conservatively estimated with level 1 Potential Intake's.

## SKIN CONTAMINATIONS: (5)

- 1) <u>B776, waste packaging:</u> Contamination was discovered on the skin of a D&D worker during the doffing process (2118dpm to the skin of her upper chest). Waste packaging in room 134 should have been performed in supplied air suits instead of Anti-Cs and PAPRs. The problem is classified as a lack of adequate work controls because inadequate consideration of the complexities associated with doing the job.
- 2) <u>B371, glovebox gloves</u>: A worker received 480 dpm/100cm2 of skin contamination on his right elbow while working in glovebox gloves. The apparent cause was a leak in the glovebox port
- 3) <u>B776, accidental knife cut:</u> A worker was using a knife to remove tape when his hand slipped, and his arm was cut. The wound was positive, but decontamination efforts were believed successful. He was referred to an offsite hospital for additional treatment.
- 4) <u>B371, hole in glove:</u> A D&D worker received 451 dpm/100cm2 on his skin from a hole in a glove.
- 5) <u>B371, error in placing TID:</u> A waste worker and an RCT removed an 8801 inner can from its outer plastic wrapping in order to place a TID. The inner can's lid had been improperly applied and materiel burst into the air when the plastic was removed. The worker had 4800 dpm on her hair and the RCT had 300 dpm on her neck and hair.

RAD/HAZ TRANSPORT INCIDENTS: None.

SITE NONCOMPLIANCE TRACKING REPORT: None.

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## **Cost Performance**



#### Cost

LIFECYCLE: 57.5% of scope completed; 54% of target cost expended

Cost Variance +7%, +\$152M

Cost Variance for target activities improved by ~\$10M this month, while remaining at a positive 7% variance against the baseline plan. The Cost Variance on the Project remains significantly positive, with more than \$152 million in cost savings accumulated since the beginning of the contract.

Most of the negative variance in the project is concentrated in PBD A (B371). Over the past year, PBD A has averaged an increase of nearly \$3M per month in negative cost variance – mostly from PuSPS and related activities which ended on the 8<sup>th</sup> of July. CV is expected to improve in the future. Activities in this PBD dominate the critical path.

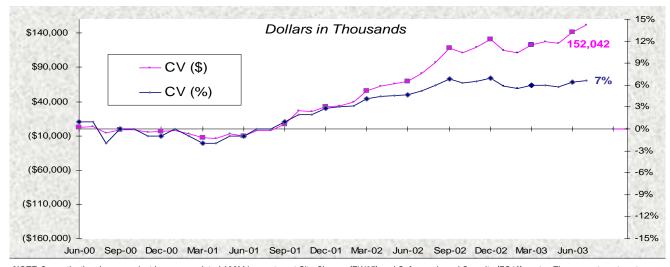
The positive cost variances continue to be concentrated in: PBD E, Industrial and Site Services Project (\$81M); PBD G, the Environmental Remediation Project (\$36M), and in the level-of-effort activities in PBD J, Support Project (\$43M). Significant cost savings in PBD F's Waste Programs and Operations are offset by cost overruns in that same PBD in the areas of Safeguards and Security, Facility Management, and PA Closure.

## **Cost Performance by PBD\*:**

Pro	ject Description	BCWP	ACWP	CV (\$)	CV (%)
1A	371 Complex Project	284,853	330,049	(45,196)	-16%
1B	707 Complex Project	167,931	172,231	(4,300)	-3%
1C	B771/774 Closure Project	199,294	206,604	(7,310)	-3.7%
1D	B776/777 Closure Project	168,447	158,948	9,499	6%
1E	Industrial and Site Services Project	423,148	341,752	81,396	19%
1F	Material Stewardship Project	521,986	503,277	18,709	3.6%
1G	Remediation Project	81,551	44,695	36,856	45%
1H	Engr., Environ, Safety & Quality	152,694	133,601	19,092	13%
1J	Support Project	289,037	245,743	43,295	15%
	Project Totals	2,288,941	2,136,899	152,042	7%

Includes all target fund sources: EW05, FS40, EW09, GG08, NN61 and YN01

#### **Cumulative Cost Variance Over Time**



**NOTE**: Currently, the closure project has accumulated \$23M in non-target Site Closure (EW05) and Safeguards and Security (FS40) costs. These non-target costs are generally the result of technical direction and may eventually be considered as part of potential Requests for Equitable Adjustment, and / or will impact cost variance.

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## **Schedule Performance**

DEFINITIONS OF ROCKY FLATS' SCHEDULE PERFORMANCE INDICATORS CAN BE FOUND IN THE GLOSSARY AT THE BACK OF THIS REPORT.



## **Comparative Schedule Performance**

The project-level positive schedule variances reflect the contractor's continued success at accelerating workscope. However, the majority of accelerated activities have been in PBDs E, G, and D – not on the Critical Path where they could contribute to accelerated closure. The current critical path is dominated by activities in Building 371(PBD A), where SNM Removal has accounted for about 1/3 of the all the negative SV in the project. K-H is applying cost savings realized in other PBDs to fund schedule reduction in PBD A, and it is anticipated that PBD A's schedule variance will continue to improve in the future.

Project		SV <sub>TRAD</sub>	SV <sub>PWA</sub> *	SV <sub>MM</sub>	SV <sub>P3</sub> +/- Days
1A	371 Complex Project	-1%	4%	-2%	133*
1B	707 Complex Project	6%	35%	16%	61
1C	B771/774 Closure Project	5.2%	29.1%	10%	36
1D	B776/777 Closure Project	15%	60%	34%	227
1E	Industrial and Site Services Project	21%	189%	81%	178
1F	Material Stewardship Project	3%	109%	12%	184
1G	Environmental Remediation	50%	2109%	57%	153**
_	Т	otal Project: 7%	63%	26%	153 **

<sup>\*</sup>These are K-H reported values. RFFO validates and reports on PWA performance quarterly, in the Total Project Report

\*\*Under RFFO Review



## **P3** Completion

The K-H generated Estimated Completion Dates (using P<sup>3</sup> project scheduling software), are represented below.

K-H continues to examine the critical path activities to identify schedule acceleration opportunities. RFFO is monitoring the critical path and for the foreseeable future will continue to utilize December 15, 2006 as the estimated completion date.

PBD	<b>Activity Description</b>	Baseline Early Finish	Statused Early Finish
Α	B371	11-Oct-06	14-Mar-06
В	B707	13-Mar-06	05-Dec-05
С	B771/774	18-Aug-04	28-Jun-04
D	B776/777	31-Oct-06	01-Nov-05
Е	Industrial Sites	11-Oct-06	03-Jan-06
F	Material Stew.	13-Dec-06	23-Feb-06
G	ER	14-Dec-06	13-Apr-06
	Total Project	14-Dec-06	13-Apr-06*

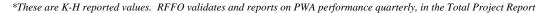
\*Under RFFO Review

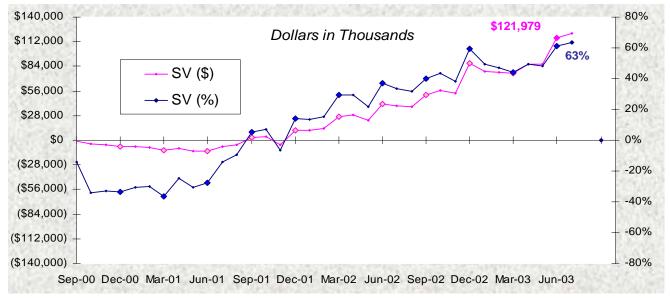


## **Predetermined Work Activities**

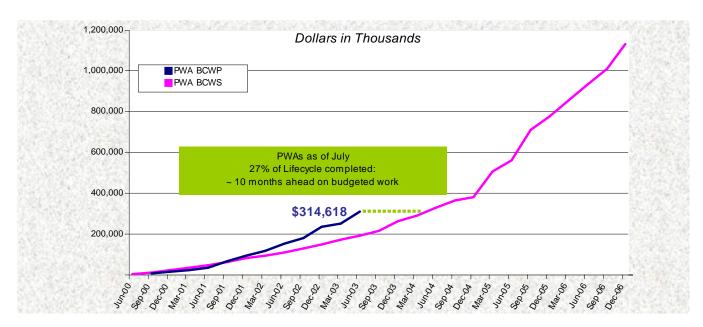
 $SV_{PWA}$  (+\$122M, +63%)\*

Another \$5M in critical closure scope was completed during the month of July. The schedule variance on Predetermined Work Activities continues the positive gains they achieved last quarter. The current PWA schedule variance remains highly positive, and shows that the contractor has completed more than half again as much critical closure work than their baseline estimate. The current BCWS for these activities is \$193M with a lifecycle BCWS of \$1.145B. At the end of July, 2003, 51% of the contract schedule had elapsed (42 out of 82.5 months), 17% of the PWA scope was scheduled for completion (\$122M), and 27.5% (\$315M) of the PWA scope is complete.





## PWA Schedule: Actual against Baseline Projection



# **Project Metrics**

Project Metric	Life Cycle Planned <sup>1</sup>	Actuals to Date	LC Completion	CPB Planned for end of FY	FY Completion	Actuals for Month	FY Actuals	FY Plan (AWA)
Low Level Waste Disposed (m <sup>3</sup> )	184,475	84,570	46%	67,521	125%	3,180	37,030	37,000
Low Level Mixed Waste Disposed (m <sup>3</sup> )	44,614	21,474	48%	6,170	348%	2,081	18,185	8,700
TRU Waste Disposed (m <sup>3</sup> )	12,355	7,423	60%	6,119	121%	413	3,288	3,000
Certified 3013 Containers Produced	1,895	1,895	100% <sup>2</sup>	1,900	100%	89	911	716
MAAs Eliminated	7	6 <sup>3</sup>	86%	0	8	0	0	
B371 Project Work Sets	60	17	28%	17	100%	1	12	14
B707 Project Work Sets	98	57	58%	43	133%	0	22	17
B771 Project Work Sets	106	67	63%	33	203%	0	18	15
B776 Project Work Sets	82	72	88%	61	118%	0	6	13
<b>Facilities Demolished</b>	290	116	40%	86	135%	2	33	43
<b>Nuclear Facilities Decommissioned</b>	6	1	17%	0	NA	0	0	
Radioactive Facilities Decommissioned	54	9	17%	0	∞	1	9	
<b>Industrial Facilities Decommissioned</b>	317	189	60%	157	120%	1	24	
<b>Environmental PWAs Completed</b>	65	18	28%	11	164%	4	16	9
<b>Environmental Remediation Sites Completed</b>	359	177	49%	158	112%	10	49	18
Gloveboxes removed	1,324	1001	76%			16	247	403

 $<sup>^1</sup>$  "Life Cycle" based on Closure Project Baseline metrics and New Corporate Performance Measures  $^2$  PuSPS production completed July 2003.

<sup>&</sup>lt;sup>3</sup> The 7<sup>th</sup> and last MAA was eliminated on August 8, 2003

## **Key Definitions / Terms**

## **Rocky Flats' schedule performance indicators:**

All indicators (except P3) use the standard formula SV=BCWP-BCWS and are measured in dollars, not time. Performance is measured against the Life-Cycle Baseline as presented in June 2000 with minimal adjustments approved through our rigorous Change Control Process. The indicators defined below differ mainly in which budgeted costs are included in the analysis.

**Traditional Schedule Variance (SV**<sub>TRAD</sub>): This indicator addresses schedule performance compared to plan for the entire project contracted with Kaiser-Hill. It includes all "Target" costs as defined by the contract (EW05, EW09 (formerly EW02), FS40, GG08, YN01, and NN61). It does NOT include budgeted costs for things like performance fee, technology deployment, and program (RFFO) funds. A positive variance means that, compared to the original plan, more work was accomplished than planned. A negative variance means that less work has been accomplished than planned.

Modified Milestone Schedule Variance ( $SV_{MM}$ ): This schedule performance indicator is designed to focus on all the 'real' work at the site. It removes level-of-effort activities from the analysis, but adds the Technology Deployment budget. Again, the variance indicates that more work or less work was accomplished than planned.

Predetermined Work Activities Schedule Variance ( $SV_{PWA}$ ): In order to best assure that the government is awarding performance fee for the accomplishment and acceleration of the most important work at Rocky Flats, our contract with Kaiser-Hill includes a list and schedule of ~900 "Predetermined Work Activities" against which performance is measured and provisional fee is paid. Generally,  $SV_{PWA}$  calculations allow for earning value only when an activity is 100% complete (all or none), unless the activity is a quantity-based measure. These activities represent critical work necessary to the timely closure of the Site, and performance is measured against the baseline schedule set out at the beginning of the contract. Although the contractor is free to realign specific work activities as they see fit, the dollar amount of work accomplished against these critical activities is expected to remain on plan to facilitate timely closure of the site.

**Primavera Project Planner Schedule Variance** (SV<sub>P3</sub>): In contrast with the previous indicators, the P3 schedule variance is measured in units of time (days). The Primavera project scheduling software computes the longest (critical) path through the contractual work on the Project and arrives at the Statused Early Finish, (a.k.a. Estimated Completion Date). Variance is measured against the Baseline Early Finish as established in June 2000.

**Orphans** – **Low Level Mixed Waste Orphans.** Wastes which must be removed from the Site but for which no disposal / treatment path has been identified and/or approved.

- **D&D Deactivation and Decommissioning.** Deactivation: the process of placing a "building" in a safe and stable condition. Decommissioning: All activities that occur after deactivation. Includes decontamination and dismantlement /demolition.
- M5 RFCA Earned Value Aggregate (over 50%) Milestone. Fiscal Milestones M1 M4 require that 50% of the FYBCWS in each individual category be completed in that fiscal year. The FY M5 Milestone tracks the dollar value of the remaining BCWS in those categories for the fiscal year and requires that it be completed before the end of the *following* fiscal year. The M5 Earned Value Milestone can be satisfied with any combination of BCWP from LLW, D&D, ER, and TRU. However, the M5 milestone must be completed for each fiscal year before BCWP can be applied to Milestones M1 M4 in the following year.
- **PBD A 371 Complex Project.** Liquid waste ops, Plutonium Stabilization & Packaging System (PuSPS), repackaging of residues, SNM removal (including shipping), and D&D. Building demolition by October 11, 2006.
- **PBD B 707 Complex Project.** SNM holdup removal, consolidation of SNM into B371, classified matter removal, and D&D. Building demolition by 3/1/06.
- **PBD** C **771 Complex Project.** Complex D&D and D&D Programs (site decommissioning program and EM-50 funded projects). Building demolition by 8/04/04.
- **PBD D 776 Complex Project.** D&D. Building demolition by 10/27/05. Removal of the slab/foundation by 4/26/06 and project completion by 10/31/06.
- PBD E Industrial / Site Services Project. The industrial and site services portion of the RISS Project, and other bldg D&D.
- **PBD F Material Stewardship Project.** Technical program direction and operational support for commodities, engineered services, procurement, traffic & transportation, and disposition of waste.
- **PBD G Remediation Project**. The Environmental Restoration (ER) Program portion of the RISS project. The overall scope includes Industrial Area and Buffer Zone Closure and environmental restoration including any remaining characterization.
- **PBD H Engineering, Environmental, Safety, Quality, and Health**. Infrastructure. Includes; project management, assessment, oversight, regulatory compliance and monitoring, waste certification, technical training, Nuclear Safety and Licensing, Criticality Safety, Fire Protection, Engineering, Safety/Work Control, and Radiological Protection.
- PBD J Support Project. General Counsel & Audit (GC&A), Strategic Planning & Integration, Administration, and the K-H

Executive Office.